

CLAIMS

We claim:

1. An apparatus for feeding sliders from a zipper
5 supply to a slider insertion area, said apparatus
comprising:
 - a source of sliders;
 - an elongated sender track having a slider entry port
and a slider exit port;
 - 10 a first controller including a blocking member
interposed between the source of the sliders and the
slider entry port, said first controller being responsive
to the sliders on said sender track to control a flow of
sliders from said source of sliders to said slider entry
15 port;
 - a feed tube extending from said slider exit port
toward said slider insertion area; and
 - a source of pressurized air having an outlet
directing said air to urge said sliders along said sender
20 track through said feed tube.
2. The apparatus in accordance with claim 1 further
comprising a second controller including a blocking
member interposed between the slider exit port and said
25 slider insertion area, said second controller being
responsive to the sliders at said slider insertion area
to control a flow of sliders from said slider exit port
end to said slider insertion area.

3. The apparatus in accordance with claim 1 wherein said sender track is fluidly attached to said source of pressurized air through at least one connection, said connection positioned along an elongated portion of said sender track.

4. The apparatus in accordance with claim 1 wherein said first controller includes a sensor for determining the number of sliders on said sender track.

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5. The apparatus in accordance with claim 2 wherein said second controller includes a first sensor for determining the number of sliders in said slider insertion area.

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6. The apparatus in accordance with claim 5 wherein said feed tube further comprises an interior passage formed to the shape of said sliders with the cross-section of said interior passage being larger than the cross-section of said sliders.

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7. The apparatus in accordance with claim 6 wherein said feed tube further comprises an entry port with a bellmouth wherein a larger diameter cross-section of the bellmouth attaches to the slider exit port of the sender track to direct the sliders along an interior curvature of the bellmouth to the interior passage of the feed tube.

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8. The apparatus in accordance with claim 7 wherein said feed tube further comprises over-pressurization relief passages encompassing the interior passage of the feed tube.

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9. The apparatus in accordance with claim 5 wherein said slider insertion area is on a slider loading rack wherein the second controller includes a second sensor for determining the number of sliders on said loading rack.

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10. The apparatus in accordance with claim 9 wherein said slider loading rack is fluidly attached to said source of pressurized air through at least one connection positioned along an elongated portion of said slider loading rack.

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11. The apparatus in accordance with claim 10 wherein a slider supply portion of said slider loading rack angles away from said slider insertion area.

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12. The apparatus in accordance with claim 10 wherein a slider supply portion of said slider loading rack curves away from said slider insertion area.

25 13. The apparatus in accordance with claim 1 wherein said source of sliders is contained in a vibratory bowl and said first controller further includes means for controlling the actuation of said vibratory bowl.

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14. A method of feeding sliders from a supply of sliders to an area for inserting sliders onto a zipper, said method comprising the steps of:

feeding said sliders from said supply of sliders
5 onto a sender track in response to a detected number of sliders on said sender track and

feeding said sliders from said sender track to said slider inserting area.

10 15. The method in accordance with claim 14 wherein said sliders are fed from said sender track by a source of pressurized air.

16. The method in accordance with claim 14 wherein said
15 supply of sliders is contained in a vibratory bowl and further comprising the step of controlling the actuation of said vibratory bowl in response to a detected number of sliders.

20 17. The method in accordance with claim 14 wherein said area for inserting sliders onto a zipper is on a slider loading rack, and further comprising the step of controlling the flow of sliders onto said slider loading rack in response to a detected number of sliders on said
25 slider loading rack.

18. The method in accordance with claim 15 further comprising a feeder tube interposed between said slider inserting area and said sender track and comprising the
30 further step of urging said sliders through said feeder tube by pressurized air.

19. The method in accordance with claim 15 wherein said area for inserting said sliders onto a zipper is on a slider loading rack, and comprising the further step of controlling a supply of pressurized air to said sender track from said source of pressurized air in response to a detected number of sliders on said slider loading rack.

20. The method in accordance with claim 15 wherein said area for inserting said sliders onto a zipper is on a slider loading rack, and comprising the further step of controlling a supply of pressurized air to said loading rack from said source of pressurized air in response to a detected number of sliders at said area for inserting said sliders onto a zipper.

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21. The method in accordance with claim 14 comprising the further step of controlling the flow of sliders into said area for inserting sliders onto a zipper in response to a detected number of sliders at said area for inserting sliders onto a zipper.

22. The method in accordance with claim 15 comprising the further step of controlling a supply of pressurized air to said sender track from said source of pressurized air in response to a detected number of sliders at said area for inserting said sliders onto a zipper.

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